



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,642	12/29/2000	Peter Lynton Flake	PA1447US	1487
36503	7590	06/16/2004	EXAMINER	
SYNOPSYS, INC. C/O PARK, VAUGHAN & FLEMING LLP 508 SECOND ST., SUITE 201 DAVIS, CA 95616			HARTMAN JR, RONALD D	
			ART UNIT	PAPER NUMBER
			2121	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/752,642	FLAKE ET AL. 	
	Examiner	Art Unit	
	Ronald D Hartman Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 December 2000.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-25 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/26/2001.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____.

DETAILED ACTION

1. Claims 1-25 are presented for examination.

Claim Objections

2. Claims 2, 9, 13 and 16 are objected to because of the following informalities:

These claims use "can" and "may" which render the claim indefinite. Appropriate correction is required. Furthermore, claims 9, 13 and 16 also refer to "the occurrence" which lacks antecedent basis.

Claims 1-25 should replace "HDL" with "hardware description language".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 2, "the simulation" lacks antecedent basis.

As per claim 3, "the HDL code" and "the application code" lack proper antecedent basis. From a review of claim 1, it appears that only *one* type of code is claimed; "compiled application code" or "interpreted application code", not "application code" and "HDL code".

As per claims 4-6, 8 and 18, the meets and bounds of "data types" cannot be ascertained.

As per claim 5, "may" renders the claim indefinite.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. That is, as written, claims 1, 24 and 25 are non-functional descriptive material. At best, they are software, *per se*, not tangibly embodied on a computer readable medium so as to be executable. It is also noted that none of the dependent claims resolve this problem. As best understood, the claims appear to present a means by which an interface uses compiled or interpreted application code written in a general purpose programming language (such as C).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis et al., U.S. Patent No. 6,230,307.

As per claims 1 and 24-25, Davis teaches an automated interface that uses compiled or interpreted application code written in a general purpose programming language (e.g. C6 L23-33 and C9 L47-53).

As per claim 2, Davis teaches the use of HDL code (e.g. C10 L30-40).

As per claim 3, Davis teaches the HDL code having direct data access to and from the application code (e.g. C7 L47-57 and C8 L40-45).

As per claims 4 and 18, Davis teaches automatically mapping of data (e.g. C8 L9-11).

As per claim 5, Davis teaches the use of routine calls (e.g. C5 L58).

As per claims 6, 11 and 19, Davis teaches a programming language calling mechanism (e.g. inherent to a call; rejection of claim 5 is applied; C11 L25-30).

As per claims 7, 12, 15, 20 and 22, Davis teaches the generation of wrappers (e.g. C6 L18-22).

As per claim 8, Davis teaches the wrappers automatically mapping data for direct data access when the application code is compiled (e.g. C11 L42-56).

As per claims 9, 13 and 16, Davis teaches the wrappers outputting a message upon occurrence of a call or return (e.g. C11 L25-30).

As per claims 10, 14, 17, 21 and 23, Davis teaches the use of automatic threading (e.g. C11 L49-51 and C17 L44-60 and Figure 10 and Figure 18).

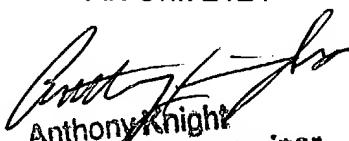
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D Hartman Jr. whose telephone number is 703-308-7001. The examiner can normally be reached on Mon. - Fri., 11:30 am - 8:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald D Hartman Jr.
Examiner
Art Unit 2121



Anthony Knight
Supervisory Patent Examiner
Group 3600